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**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

NETLIST, INC.,	)	
	)	
Plaintiff,	)	
	)	Case No. 2:22-cv-293-JRG (Lead Case)
vs.	)	
	)	JURY TRIAL DEMANDED
SAMSUNG ELECTRONICS CO., LTD, ET AL.,	))	███████████
	)	
Defendants.	)	
	)	
	)	

NETLIST, INC.,	)	
	)	
Plaintiff,	)	
	)	Case No. 2:22-cv-294-JRG (Member Case)
vs.	)	
	)	JURY TRIAL DEMANDED
MICRON TECHNOLOGY, INC.; MICRON SEMICONDUCTOR PRODUCTS, INC.; AND MICRON TECHNOLOGY TEXAS LLC,	))))	███████████
	)	
Defendants.	)	

MICRON DEFENDANTS' REPLY IN SUPPORT OF ITS MOTION FOR SUMMARY JUDGMENT OF NONINFRINGEMENT OF U.S. PATENT NOS. 7,619,912 AND 11,093,417 (ECF NO. 345)

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The Court should grant Micron's motion for summary judgment (ECF No. 345) for at least the reasons resented in Micron's opening brief and herein.

A.   *Fujitsu* Clearly Applies, and Netlist Fails to Show How Each Accused Product Implements the Optional Features.

Netlist misapprehends *Fujitsu Ltd. v. Netgear Inc.,* 620 F.3d 1321, 1327-28 (Fed. Cir. 2010). Netlist's Opposition ("Opp'n"), ECF No. 445, at 5, 7. *Fujitsu* applies when a plaintiff relies on a standard to prove infringement, as Netlist does here. *Fujitsu* at 1327-28; Netlist's Resp. to Micron's Statement of Undisputed Material Fact ("Netlist's UMF"), ECF. No. 445, ¶¶ 10, 12. Netlist must show either (1) that the accused products implement relevant optional features that infringe or (2) how each and every accused Micron Products practice the claims. *Fujitsu* at 1327-28. Netlist fails to do either.

Netlist relies on optional features from the JEDEC standard to support its infringement theories for both asserted patents. For the '912 patent, Netlist's infringement theory is predicated on accused Micron Products using one of three possible optional modes—that is, Encoded QuadCS mode. And for both patents, Netlist repeatedly relies on JEDEC standard "logic diagrams" that Netlist admits are optional. ECF No. 362 at 8 (admitting both logic diagrams are "not required"); *see id.*, 7-8. Under *Fujitsu*, Netlist must[1] show that the accused products implement these optional features. Absent doing so, Netlist has not advanced a legally sufficient infringement theory and the Court should grant Micron's motion for summary judgement. *Fujitsu*, 620 F.3d, 1327-28.

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[1] Netlist's argument that it does not solely rely on such standards is meritless. First, Netlist's expert provides a cursory review of third-party data sheets, some of which include the relevant logic diagrams copied from the standard, in concluding the RCDs and data buffers have "essentially the same structure and operate in essentially the same way," which ultimately "adhere to the standard." ECF No. 345-2, (EX-A, ¶¶ 57, 69-70). This is no different than relying solely on the standard for infringement. Second, Netlist's expert analysis for limitation [1.d] of the 417 patent and limitation [16.i] necessarily rely on the accused products practicing optional logic diagrams to satisfy specific circuitry limitations. *Id.* (EX-B, ¶¶ 56-59 and EX-C, ¶¶ 99, 102, 110, 123).

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B.   **Arguing That Dual-Rank DIMMs include RCDs Capable of Performing Encoded QuadCS Mode is Insufficient to Show '912 Patent Infringement.**

Alleged infringement based on the theory that dual-rank DIMMS include RCDs capable of performing encoded Quad CS mode fails as a matter of law. Netlist does not dispute that Micron's datasheets expressly state that its DDR4 dual-rank DIMMs *do not* implement Encoded QuadCS. Netlist's UMF, ¶ 7. Netlist thus failed to meet its burden under *Fujitsu*. Netlist is wrong that *Fujitsu* is inapplicable and its infringement theory is sound because a single component on the dual-rank DIMMs—that is, the RCD—is capable of implementing Encoded QuadCS mode. Opp'n at 3-6. The law requires that Netlist's theory must show more than mere capability of this RCD alone.

Claim 16 of the '912 patent requires more than capability of the entire dual-rank memory module, as well. It recites a "logic element *receiving a set of input signals from the computer system*." ECF No. 445-2 at p. 45 (Claim 16), 3:18-20. The claim also requires a "circuit *generating* a set of output signals *in response* to the set of input signals" and "*further responds to a command signal* and the set of input signals *from the computer system by selecting* one or two ranks … and *transmitting* the command signal." *Id.*, 3:28-35. These limitations refer to the same "set of input signals" that Netlist maps to encoded QuadCS mode. *See* Netlist's UMF, ¶ 6, ECF No. 345-2, (Ex. B, ¶¶ 36-38). They do not recite capability language of the claimed circuit alone—they recite capability language required of both the circuit and logic element in the accused memory module and the computer system that uses such a module. *See INVT SPE LLC v. Int'l Trade Comm'n*, 46 F.4th 1361, 1374-75 (Fed. Cir. 2022) (requiring plaintiff to prove infringement by showing that both the base station and accused devices are capable of performing the claim functions). Because claim 16 has these additional requirements that Netlist has not shown, Netlist's infringement theory fails as a matter of law.

Netlist must show that the entire accused dual-rank memory module and computer system

are capable of performing Encoded QuadCS mode—not just the RCD. Netlist's opposition never addresses this argument from Micron's motion. *See* ECF No. 345 at 14; *In the Matter of Certain Memory Modules & Components Thereof Comm'n Op.*, USITC Inv. No. 337-TA-1089, 2020 WL 4500711, slip op. at *13 (Apr. 21, 2020) ("Products do not necessarily use every feature of each of its components. . ."). Netlist cannot distinguish the facts from the ITC decision cited by Micron as Netlist relies on the same optional feature (Encoded QuadCS mode) found in the same component (RCD) to prove infringement here. Netlist is incorrect that an accused product that includes a single component (the RCD) capable of using encoded QuadCS mode satisfies claim 16 even if, as here, there is ***no capability*** for the entire DIMM or computer system to use such a mode. Netlist cites no authority or evidence for its unsupportable position that any of the Micron dual-rank DIMMs used in a computer system can implement Encoded QuadCS mode. *See INVT SPE*, 46 F.4th at 1374-75.

Netlist cites three inapposite cases in support of its argument. Opp'n at 4. *HP* involved apparatus claims that did not specify operational limitations performed by other components unlike Netlist's claim 16 here. *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1468 (Fed. Cir. 1990). Both *Microprocessor Enhancement Corp. v. Texas Instruments Inc.* and *Ultimate Pointer, L.L.C. v. Nintendo Co.* related to whether claims impermissibly mixed apparatus and method limitations (which the Federal Circuit answered no)—not whether apparatus claims required expressly claimed functions to be present for infringement. *Microprocessor*, 520 F.3d 1367, 1374-75 (Fed. Cir. 2008); *Ultimate Pointer*, 816 F.3d 816, 827 (Fed. Cir. 2016); *see C-Cation Techs., LLC v. Time Warner Cable, Inc.*, No. 2:14-CV-0059-JRG-RSP, 2015 WL 1849014, at *5 (E.D. Tex. Apr. 20, 2015) (addressing how a party overstated the holding of *Microprocessor*).

Netlist's reliance on testimony from Micron's engineers highlights the deficiency in

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Netlist's expert report. Notably, this testimony confirms that █████████████████████

███████████. ECF No. 445-3, 47:17-22 ████████████████████████████

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see id., 61:23-62:3. Thus, this testimony does not remedy Netlist's flawed theory.

C.   Netlist's Other Infringement Theory Does Not Address the Claim Requirements.

The Court should reject Netlist's argument that paragraphs 40-41 of Dr. Mangione-Smith's report somehow salvage its failure of proof for infringement. Paragraphs 40-41 cite evidence that is inconsistent with Dr. Mangione-Smith's explanation about how Table 12 satisfies the claim limitation [16e] in those paragraphs. *See* ECF No. 345-2, (Ex. B, ¶¶ 40-41). Claim limitation [16e] requires the "set of input signals [be] configured to control" DDR memory devices in a second number of ranks. Micron's Statement of Undisputed Material Fact ("Micron's UMF"), ECF No. 345, ¶ 6; *see also* Netlist's UMF ¶ 6. Dr. Mangione-Smith contends that █████████████████

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However, the footnote instead explains that "all ranks"—not just one—"are configured identically" (or controlled) using MRS commands from Table 12. Further, the footnote only mentions "rank 0" as being "monitored"—not used for control—which is insufficient. *See* ECF No. 345-9, ¶¶ 211-214. Thus, Netlist's theory involving Table 12 does not show infringement of Claim 16 because the MRS commands configures "all ranks identically"—███████████████

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Even if this theory did sufficiently address limitation [16e] (which it cannot), Dr. Mangione-Smith does not reference the same input signals (*i.e.*, the specific MRS commands in Table 12) for other limitations in claim 16 involving the claimed input signals. For example, in limitation [16h] that also requires the claimed input signals, Dr. Mangione-Smith refers only to the

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set of input signals involved in Encoded QuadCS mode. ECF No. 345-2, (Ex. B, ¶ 48) (addressing only encoded QuadCS mode). Notably, Dr. Mangione-Smith's analysis in limitation [16h] does not mention the MRS commands from Table 12. *See id.*, ¶¶ 47, 49-55. Consequently, Netlist's infringement theory using MRS commands from Table 12 fails to adequately address the remaining claim limitations.

D.   Netlist Fails to Offer Any Infringement Theory Showing Any Accused Products have a Claimed Circuit with a Requisite Structure Beyond the Optional Logic Diagram.

Netlist also fails to show that all accused products implement the optional logic diagrams from the JEDEC specifications. Netlist's UMF, ¶¶ 10, 12. Netlist's expert, Dr. Mangione-Smith, does not offer any opinion about how ***each*** DDR4 RCD and data buffer, which are supplied to Micron from three different third-party suppliers implement such diagrams, as *Fujitsu* requires. *Fujitsu*, 620 F.3d at 1327-28. For the '912 patent, he mentions only that ████████████ ████████████████████████████ ECF No. 345-2, (EX-B, ¶ 44). And for the '417 patent, Dr. Mangione-Smith mentions only that ████████████████████████████ ██████████████████████████. *See e.g., id.*, (Ex. C, ¶¶ 26, 31, 56, 172). Dr. Mangione-Smith did not, however, analyze whether ████████████████ ████████████████████████████████ ████████████████████████. Dr. Mangione-Smith justifies this decision with a conclusory statement that he understands ████████████████████ ████████████████████████████████ ██████████ ECF No. 345-2, (EX-A, ¶¶ 59-60). But his purported understanding relates only to the fact that these components are ***standard compliant*** components, without any evidence that ██.

Netlist's infringement theory also is insufficient under *Fujitsu* for the separate reason that

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the logic diagrams are conceptual and do not describe any requisite physical structure. *Fuijitsu*, 620 F.3d at 1327-28. Rather than explaining how the conceptual logic diagrams provide sufficient detail, Netlist argues the claims do not "require the 'circuit' to have any particular physical structure." Opp'n at 8. Not so. The asserted claims have such requirements that the logic diagram does not provide enough detail to address.

Contrary to Netlist's contention, all asserted claims require a particular physical structural. Claim 16 of the '912 patent recites a structural requirement that the "DDR memory devices, the logic element, and the register" must be "operatively coupled" to the phase lock loop. Netlist's UMF, ¶ 11. This requirement, as Dr. Stone explains, must have a particular physical structure beyond being merely "coupled." *See* ECF No. 345-9, ¶¶ 229-232, 235; *Bicon, Inc. v. Straumann Co.,* 441 F.3d 945, 950 (Fed. Cir. 2006) ("[C]laims [should be] interpreted with an eye toward giving effect to all terms in the claim."). Such a requirement, as Dr. Stone explains, would entail a "PLL (phase-lock loop) in the diagram is operatively coupled only to the devices that the PLL "operates" by means of its output being connected to an input of an operated device." *Id.*, ¶ 230; *Cross Med. Prod., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1306 (Fed. Cir. 2005) (explaining what "operatively" typically means in claims). Claim 1 of the '417 patent also requires certain physical structure: the claimed circuit must be between the data signal lines and data pins of memory devices. Micron's UMF, ¶ 13. Consequently, Netlist must show that the accused products include circuitry that satisfy these requirements.

Micron's motion explained that witnesses gave unrebutted testimony that the logic diagrams do not reflect the actual circuitry in the RCDs or buffers. Micron's UMF, ¶ 14. Netlist disputes this fact without citing any evidence to the contrary. Netlist's UMF, ¶ 14. Netlist argues that because the claims do not have any physical structure requirements, no evidence of actual

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circuitry is needed. Opp'n at 8. But this is incorrect. If the asserted claims have no such requirements, the terms "operatively" and "between" are effectively rendered superfluous. *Bicon,* 441 F.3d at 950.

Fuijitsu requires Netlist to compare the claims against the actual circuitry of the RCDs and data buffers to prove infringement. Netlist failed to do so. *Fujitsu* at 1327-28. Netlist's expert instead relies on nothing more than optional logic diagrams without any evidence of how or whether the logic is physically implement in the actual circuitry in the accused products. Netlist's infringement theory thus fails as a matter of law. The Court should grant summary judgment of non-infringement in favor of Micron.

Dated: February 7, 2024   Respectfully submitted,

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<u>CERTIFICATE OF SERVICE</u>

I certify that, on February 7, 2024, a copy of the foregoing was served on all counsel of record via the Court's ECF system and email.

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/s/ Michael R. Rueckheim
Michael R. Rueckheim

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<u>CERTIFICATE OF AUTHORIZATION TO FILE UNDER SEAL</u>

I hereby certify that the foregoing document and exhibits attached hereto are authorized to be filed under seal pursuant to the Protective Order entered in this Case.

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/s/ Michael R. Rueckheim
Michael R. Rueckheim

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